

Translation

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY
(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

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| Applicant's or agent's file reference P802402/WO/1 | FOR FURTHER ACTION | See Form PCT/IPEA/416 |
| International application No. PCT/EP2004/001399 | International filing date (day/month/year) 14.02.2004 | Priority date (day/month/year) 28.03.2003 |
| International Patent Classification (IPC) or national classification and IPC | | |
| Applicant DAIMLERCHRYSLER AG | | |

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|---|--------------|---|-----------|---------------------|--------------------------|------------|----------|--------------------------|-------------|--|--------------------------|------------|----------------------------|-------------------------------------|-----------|---|--------------------------|------------|-------------------------|--------------------------|-------------|--|--------------------------|--------------|---|
| <p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of <u>8</u> sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input type="checkbox"/> (sent to the applicant and to the International Bureau) a total of _____ sheets, as follows:</p> <p><input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p>b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p> | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>4. This report contains indications relating to the following items:</p> <table border="0"> <tr> <td><input checked="" type="checkbox"/></td> <td>Box No. I</td> <td>Basis of the report</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. II</td> <td>Priority</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. III</td> <td>Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. IV</td> <td>Lack of unity of invention</td> </tr> <tr> <td><input checked="" type="checkbox"/></td> <td>Box No. V</td> <td>Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. VI</td> <td>Certain documents cited</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. VII</td> <td>Certain defects in the international application</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. VIII</td> <td>Certain observations on the international application</td> </tr> </table> | | <input checked="" type="checkbox"/> | Box No. I | Basis of the report | <input type="checkbox"/> | Box No. II | Priority | <input type="checkbox"/> | Box No. III | Non-establishment of opinion with regard to novelty, inventive step and industrial applicability | <input type="checkbox"/> | Box No. IV | Lack of unity of invention | <input checked="" type="checkbox"/> | Box No. V | Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement | <input type="checkbox"/> | Box No. VI | Certain documents cited | <input type="checkbox"/> | Box No. VII | Certain defects in the international application | <input type="checkbox"/> | Box No. VIII | Certain observations on the international application |
| <input checked="" type="checkbox"/> | Box No. I | Basis of the report | | | | | | | | | | | | | | | | | | | | | | | |
| <input type="checkbox"/> | Box No. II | Priority | | | | | | | | | | | | | | | | | | | | | | | |
| <input type="checkbox"/> | Box No. III | Non-establishment of opinion with regard to novelty, inventive step and industrial applicability | | | | | | | | | | | | | | | | | | | | | | | |
| <input type="checkbox"/> | Box No. IV | Lack of unity of invention | | | | | | | | | | | | | | | | | | | | | | | |
| <input checked="" type="checkbox"/> | Box No. V | Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement | | | | | | | | | | | | | | | | | | | | | | | |
| <input type="checkbox"/> | Box No. VI | Certain documents cited | | | | | | | | | | | | | | | | | | | | | | | |
| <input type="checkbox"/> | Box No. VII | Certain defects in the international application | | | | | | | | | | | | | | | | | | | | | | | |
| <input type="checkbox"/> | Box No. VIII | Certain observations on the international application | | | | | | | | | | | | | | | | | | | | | | | |

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| Date of submission of the demand | Date of completion of this report |
| Name and mailing address of the IPEA/EP | Authorized officer |
| Facsimile No. | Telephone No. |

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/EP2004/001399

Box No. I

Basis of the report

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This report is based on translations from the original language into the following language _____, which is the language of a translation furnished for the purposes of:
- ☐ international search (Rule 12.3 and 23.1(b))
- ☐ publication of the international application (Rule 12.4)
- ☐ international preliminary examination (Rule 55.2 and/or 55.3)
2. With regard to the **elements** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:
- ☐ the international application as originally filed/furnished
- ☒ the description:
- pages 1-6 _____ as originally filed/furnished
- pages* _____ received by this Authority on _____
- pages* _____ received by this Authority on _____
- ☒ the claims:
- nos. 1-8 _____ as originally filed/furnished
- nos.* _____ as amended (together with any statement) under Article 19
- nos.* _____ received by this Authority on _____
- nos.* _____ received by this Authority on _____
- ☒ the drawings:
- sheets 1/3-3/3 _____ as originally filed/furnished
- sheets* _____ received by this Authority on _____
- sheets* _____ received by this Authority on _____
- ☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.
3. ☐ The amendments have resulted in the cancellation of:
- ☐ the description, pages _____
- ☐ the claims, nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (*specify*): _____
- ☐ any table(s) related to sequence listing (*specify*): _____
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
- ☐ the description, pages _____
- ☐ the claims, nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (*specify*): _____
- ☐ any table(s) related to sequence listing (*specify*): _____

* If item 4 applies, some or all of those sheets may be marked "superseded."

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/EP2004/001399

| Box No. V | Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement | | |
|--|---|------------|-----|
| 1. Statement | | | |
| Novelty (N) | Claims | 3-6 | YES |
| | Claims | 1, 2, 7, 8 | NO |
| Inventive step (IS) | Claims | | YES |
| | Claims | 1-8 | NO |
| Industrial applicability (IA) | Claims | 1-8 | YES |
| | Claims | | NO |
| 2. Citations and explanations (Rule 70.7) | | | |
| <p>This report makes reference to the following documents:</p> | | | |
| <p>D1: GB742104</p> | | | |
| <p>D2: US4736893</p> | | | |
| <p>D3: US4646977</p> | | | |
| <p>1.1 The present application does not meet the requirements of PCT Article 33(1) because the subject matter of claim 1 is not novel within the meaning of PCT Article 33(2). The reasons are:</p> | | | |
| <p>D1 discloses (the references in parentheses are to this document):</p> | | | |
| <p>spray head (3) with a nozzle support (3) and at least one replacement nozzle (1, 2) arranged in a bore (7) of the nozzle support, said replacement nozzle being sealed along an annular surface (cf. figure 1) opposite the wall of the bore, wherein the bottom of the bore is conically shaped (cf. page 1, lines 53-66), the nozzle seat is likewise conically shaped (cf. figure 1) and in an</p> | | | |

| Box No. V | Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement |
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| | <p>installed and functional state the nozzle seat rests along an annular surface directly and sealingly on the bore bottom (cf. figure 1).</p> <p>The disclosure of D2 is identical.</p> <p>1.2 The present application does not meet the requirements of PCT Article 33(1) because the subject matter of claim 2 is not novel within the meaning of PCT Article 33(2). The reasons are:</p> <p>D2 discloses (the references in parentheses are to this document):</p> <p>spray head wherein the angle of opening of the bore bottom is greater than the corresponding flank angle of the nozzle seat (cf. figure 1).</p> <p>1.3 The present application does not meet the requirements of PCT Article 33(1) because the subject matter of claim 7 is not novel within the meaning of PCT Article 33(2). The reasons are:</p> <p>D1 discloses (the references in parentheses are to this document):</p> <p>spray head wherein the bearing is locked on the high-pressure side (page 1, lines 82-93).</p> <p>1.4 The present application does not meet the requirements of PCT Article 33(1) because the subject matter of claim 8 is not novel within the</p> |

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| Box No. V | Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement |
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meaning of PCT Article 33(2). The reasons are:

D1 discloses (the references in parentheses are to this document):

spray head wherein the replacement nozzle is retained in the bore by means of an externally arranged retaining screw (6) in the installed state and wherein the retaining screw is screwed into the bore of the nozzle support (4) and wherein the screw bottom is conically shaped (a domed shape is also conical) and wherein the screw seat is likewise correspondingly conically shaped (cf. figure 1).

2. The present application does not meet the requirements of PCT Article 33(1) because the subject matter of claims 3 and 4 does not involve an inventive step within the meaning of PCT Article 33(3)).

D2, which is considered to represent the prior art closest to the subject matter of claims 3 and 4, discloses (the references in parentheses are to this document):

spray head wherein the angle of opening of the bore bottom is greater than the corresponding flank angle of the nozzle seat.

The subject matter of claims 3 and 4 thus differs from the known spray head in that the flank angle

| Box No. V | Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement |
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| | <p>diverges from the angle of opening by a maximum of about 5 DEG and that the flank angle of the nozzle seat is about 58 DEG and that of the angle of opening of the bore bottom about 60 DEG.</p> <p>The problem addressed by the present invention may therefore be considered that of ensuring that the nozzle seat rests securely on the bore bottom.</p> <p>The feature of an angle of divergence of 5 DEG, a nozzle seat angle of 58 DEG and a bore bottom angle of 60 DEG is only one of several obvious possibilities from which a person skilled in the art would choose according to the circumstances in order to solve the problem of interest, without thereby being inventive.</p> <p>3. The present application does not meet the requirements of PCT Article 33(1) because the subject matter of claims 5 and 6 does not involve an inventive step within the meaning of PCT Article 33(3)).</p> <p>D1, which is considered to represent the prior art closest to the subject matter of claims 5 and 6, discloses (the references in parentheses are to this document):</p> <p>spray head wherein the shape of the cross-sectional area corresponds (cf. figure 1).</p> <p>The subject matter of claims 5 and 6 thus differs</p> |

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| Box No. V | Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement |
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| | <p>from the known spray head in that the cross-sectional surfaces diverge from circularity and wherein the cross-sectional surfaces are circular with circular arc segments that have been removed in parallel to each other.</p> <p>D2 describes the same advantages as the present application with respect to the feature of a circular form with circular arc segments removed in parallel to each other (cf. column 3, line 65 to column 4, line 18). A person skilled in the art would therefore consider inclusion of this feature in the cross-sectional surfaces described in D1 to be a routine design measure for solving the problem of interest.</p> |

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.

Continuation of: I

With regard to the elements of the international application, this report is based on:

In the version for the Contracting States:

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI
LT LU LV MC MK NL PL PT RO SE SI SK TR

Description, pages 1-6

as originally filed

Claims, 1-8

as originally filed

Drawings, sheets 1/3 to 3/3

as originally filed